

REMARKS

This is in response to the office action dated April 11, 2005. Applicants wish to thank the Examiner for her careful review of the application.

5 Applicants note the statements in paragraphs 1 and 2 of the office action to which no response is required.

Applicants note the rejection in paragraphs 3 and 4 of the office action and appropriate correction has been made to claim 19. Claims 19 and 20 are believed to be allowable.

10 **Claim 25 was rejected under 35 USC 102(b) as being anticipated by Enomoto (US 5453229) as set forth in paragraphs 5 and 6 of the office action.**

First, it must be stated that claim 25 was previously allowed and that Enomoto had been considered by the Examiner.

The Examiner states that a woven cloth 2 of Enomoto = braid= weave and cites some dictionary printouts in support thereof. Enomoto states in the abstract that an inner reinforcement layer is formed by brading steel wires or fibers and a mandrel. It is respectfully suggested that the equation of braided steel wires or fibers is not equivalent to cloth. The fact that Dougherty '921 mentions a cloth braid is of no avail because it doesn't mean anything especially where as here the Examiner has issued a rejection based on anticipation under 35 USC 102(b). Emphatically, Enomoto does not teach supplying gas through a woven cloth and into a tube! Fig. 2 of Enomoto illustrates tube 14 which

carries pressurized air or nitrogen through the mandrel 11, not the braid. The '610 patent to Guelich, newly cited by the Examiner, is of no avail as this rejection is under 35 USC 102(b) based on Enomoto. This is not a section 103 rejection. All of the elements and limitations must be found in a single reference under 35 USC 102(b). Reconsideration of 5 claim 25 is respectfully suggested.

In paragraph 14 of the office action, Claim 25 was rejected under 35 U.S.C. 103(a) as being unpatentable over Merck et al. in view of Dougherty.

The Examiner makes the statement: "One reading the Merck reference as a whole would have appreciated that the means for pressurizing the hose is not critical to the 10 invention and therefore would have been motivated to use air as an alternative to fluid because such is known in the art, as taught by Dougherty, were only the expected results of maintaining the shape of the hose during vulcanization would have been achieved." A careful reading of Merck, however, reveals that the fluid within the "fluid mandrel" is heated and results in at least a partial curing of the interior 17 of the hose. Therefore, air 15 could not be used in Merck as suggested by the Examiner. Curing tubes 33/115 are contact heaters as previously stated in response to other office actions. Merck, as understood, requires a fluid lubricant and a fluid mandrel. The lubricant allows the hose to move through the contact heater 115. Claim 25 requires "supplying gas through said woven cloth, into said tube, and through said mandrel". Neither Merck nor Dougherty 20 remotely suggest this step. Merck supplies a lubricating and internally heating fluid within curing tubes with the fluid creating a fluid mandrel to support the newly formed

hose. Dougherty teaches reinforcement embedded into the tie gum. Merck and Dougherty as understood have nothing to do with each other and their combination is seemingly illogical and does not make any sense.

Reconsideration of claim 25 is respectfully requested.

5 **In paragraph 15 of the office action, claims 26-30 were rejected as being unpatentable over Merck et al. and Dougherty as applied to claim 25 above, and further in view of Hopkins and the collective teachings of Gattrugeri and Kunz et al.**

Claim 25 is patentable as set forth above and therefore claims 26-30 are also patentable. Again, a check valve is not a flow regulator. Check valves are passive, not active devices, and just sit there. A flow regulator requires more. Hopkins teaches a valve and Gattrugeri teaches a check valve and Kunz suggests a check valve but this does not provide a suggestion or motivation for combination with Merck and/or Dougherty.

10 Reconsideration of claims 26-30 is requested.

15 **In paragraph 8 of the office action, claims 26-29 were rejected under 35 USC 103(a) as being unpatentable over Enomoto as allied to claim 25 above and further in view of Hopkins (US 4121962) and the collective teachings of Gattrugeri (US 3904144) and Kunz (US 6296054).**

20 As indicated above, Enomoto does not anticipate claim 25. Since claims 26-29 are dependent on allowable claim 25, they are also allowable. Once again, the Examiner has made a factual misstatement. Namely, the check valve does not intermittently supply gas, the gas supply cup intermittently supplies gas to the interior of the hose. A check valve

does not regulate the flow of pressurized air. Check valves simply open to allow flow of air or other fluid in a unitary direction like diodes in an electronic circuit. Check valves are used to prohibit flow in a reverse direction. The Examiner seems to think that they are pressure regulators and they are not. Hopkins teaches nothing more than a valve 34,

- 5 Gattrugeri and Kunz (mentions) teach use of check valves in a reel gripping apparatus and a well casing, respectively. Kunz doesn't even show how a check valve would be used. The step of measuring the outside diameter of a hose upon exit from a heater is not taught or suggested by any of the references. The step of supplying gas through said woven cloth and into said tube being performed intermittently at a frequency necessary to insure 10 the correct diametrical dimensions of said hose is not taught or suggested by any of the references. The step of varying the frequency of supplying air through a woven jacket is increased when the outside diameter is too small and the frequency of supply air is decreased when the outside diameter is too large is not taught or suggested by any of the references. The combination of at least the Gattrugeri and Kunz references cited by the 15 Examiner is not suggested by either them implicitly or explicitly because the problems they address have nothing to do with the claimed invention or the other references.

In paragraph 18 of the office action, claim 25 was rejected under 35 USC 103(a) as being unpatentable over Arterburn in view of the collective teachings of Kolnishe and Enomoto

- 20 The Examiner correctly states that Arterburn does not teach pressurizing the extruded rubber hose by intermittently supplying air to and through a check valve in a

mandrel and into a cavity formed by the check valve, the mandrel, the hose and the pinch rollers and trapping air inside. Nothing in Kolnsiche or Enomoto teach of suggest intermittently supplying air to and through a check valve in a mandrel and into the recited cavity which is formed in part by the check valve. Arterburn is directed toward forming a
5 deformation resistant hose by applying a latex dispersion to the hose or its reinforcement and then vulcanizing. It is respectfully suggested that the Examiner has sifted through the patent database to locate bits and pieces of the claimed invention and then to combine them using hindsight reconstruction to arrive at the invention of claim 25.

The Examiner makes the statement "As for feeding the woven cloth over a tube
10 and the mandrel, such would have been obvious since it is known in the art to feed reinforcement over a mandrel having a tube within where air/gas is fed into the tube to pressurize and therefore support the unvulcanized hose once it is removed from the mandrel, as taught by Enomoto (Figure 2)." This statement is incorrect. Absolutely nothing in Enomoto discloses or suggests supplying gas through said woven cloth!
15 Supplying gas or air through a woven cloth is novel and nonobvious.

In paragraph 19 of the office action, claims 26-30 were rejected under 35 USC 103(a) as being unpatentable over Arterburn and the collective teachings of Kolnishe and Enomoto as applied to claim 25 and further in view of Hopkins and the collective teachings of Gattrugeri and Kunz et al.

20 Claims 25 is patentable as set forth above and therefore claims 26-30 are patentable as being dependent therefrom. Hopkins does nothing more than disclose a

valve. Gattrugeri and Kunz disclose or merely suggest a check valve. Their combination is nothing more than an attempted hindsight reconstruction of the claimed invention set forth in claims 26-30. Measuring (cl. 26), supplying gas at a frequency (cl. 27), increasing/decreasing the frequency of gas supply (cl. 28), using a check valve (cl. 28) are 5 not anywhere suggested or taught by these references in the manner claimed.

Reconsideration of claims 26-30 is requested.

In paragraph 9 of the office action claim 30 was rejected under 35 U.S.C. 103(a) as being unpatentable over Enomoto and Hopkins and the collective 10 teachings of Gattrugeri and Kunz et al. as applied to claim 26 above and further in view of Galloway (US 4155790).

The Examiner makes the statement that "One reading Enomoto as a whole would have appreciated that the vulcanizing means (salt bath; column 6, lines 28-29) is not critical to the invention and therefore would have been motivated to use microwaves as an alternative to the salt bath because such is known in the art, as taught by Galloway, 15 wherein such allows for vulcanization by means of induction rather than conduction.".

Applicants respectfully disagree that Enomoto, read as a whole, is ambivalent about the curing of the hose. First, Enomoto is made with metal braiding which would reflect the microwave energy applied thereto. Microwaves are believed to be standing waves not useable with metals and they are not inductive. Second, Enomoto goes into detail about 20 the need to submerge his hose in the salt bath and to keep it from floating by using metal belts in the salt bath. Col. 6, lines 24 et seq. of Enomoto. Enomoto did not contemplate

using any other type of vulcanization method as he is very specific as to timing and rates and the like in his vulcanization process.

Claim 30 is dependent on allowable claims 26 and 25 and therefore is allowable for that reason. Additionally, claim 30 is allowable for the reason given directly above.

5 Reconsideration of claim 30 is respectfully requested.

Claims 9 and 33-36 were rejected under 35 U.S.C. 103 (a) as being unpatentable over: Paragraph 10: Enomoto, and the collective teachings of Kolnishe, Merck, Dougherty; Galloway, Hopkins, Gattrugeri, and Kunz, et. al; Paragraph 12: Merck, Dougherty, Hopkins, Gattrugeri '144 and Kunz '054; Paragraph 16: Arterburn, in view of the collective teachings of Kolnishe, Enomoto, Hopkins, Gattrugeri and Kunz et al.; Paragraph 20: Satzler '039, Galloway, Kolnishe, Enomoto, Hopkins, Gattrugeri and Kunz et. al.

In regard to the paragraph 10 rejection, the Examiner states that "it would have been obvious to the skilled artisan to determine if the pressure within the hose needed to be increased or decreased to reach the desired pressure of Enomoto thereby making it obvious to use the check valve to intermittently supply gas to the hose based on the need to increase/decrease the pressure within the hose." However, as explained above the check valve is not responsible for the intermittent supply of gas to the hose. Claim 9 states that air is intermittently supplied to and through the check valve not by the check valve. Claim 9 further recites a cavity formed by the check valve, the mandrel, the hose and the pinch rollers. Enomoto does not have the cavity nor do any of the other

references. Further, the differences between a non-contact heater and a salt bath are substantial. The hose of Enomoto is not capable of being heated by microwave without some damage to the microwave device.

It is respectfully suggested that the Examiner's logic in applying the 8 references
5 of paragraph 10 of the office action is so convoluted that sense cannot be reasonably made from it except as to apply bits and pieces of the references in an attempt to arrive at the claimed invention by hindsight reconstruction. The references do not lend themselves to combination or modification either explicitly or implicitly.

Reconsideration of claims 9 and 33-36 is requested in view of the paragraph 10
10 rejection.

In regard to paragraph 12 of the office action, the Examiner makes the statement:
"One reading the Merck reference as a whole would have appreciated that the means for pressurizing the hose is not critical to the invention and therefore would have been motivated to use air as an alternative to fluid because such is known in the art, as taught
15 by Dougherty, were only the expected results of maintaining the shape of the hose during vulcanization would have been achieved." A careful reading of Merck, however, reveals that the fluid within the "fluid mandrel" is heated and results in at least a partial curing of the interior 17 of the hose. Therefore, air could not be used in Merck as suggested by the Examiner. Curing tubes 33/115 are contact heaters as previously stated in response to
20 other office actions. Merck, as understood, requires a fluid lubricant and a fluid mandrel. The lubricant allows the hose to move through the contact heater 115. All of the

teachings of Merck would have to be discarded to vulcanize using microwave energy because the contact heaters 33/115 are metal and would radiate microwave energy back to the source probably causing great destruction to the standing wave generator.

It is respectfully suggested that the Examiner's logic in applying the 5 references
5 of paragraph 12 of the office action is so convoluted that sense cannot be reasonably made from it except as to apply bits and pieces of the references in an attempt to arrive at the claimed invention by hindsight reconstruction. The references do not lend themselves to combination or modification either explicitly or implicitly.

Reconsideration of claims 9 and 33-36 is requested in view of the paragraph 12
10 rejection.

In regard to paragraph 16, the Examiner correctly states that Arterburn does not teach pressurizing the extruded rubber hose by intermittently supplying air to and through a check valve in a mandrel and into a cavity formed by the check valve, the mandrel, the hose and the pinch rollers and trapping air inside. Nothing in Kolnsiche or Enomoto
15 teach of suggest intermittently supplying air to and through a check valve in a mandrel and into the recited cavity which is formed in part by the check valve. Arterburn is directed toward forming a deformation resistant hose by applying a latex dispersion to the hose or its reinforcement and then vulcanizing. It is respectfully suggested that the Examiner has sifted through the patent database to locate bits and pieces of the claimed
20 invention and then to combine them using hindsight reconstruction to arrive at the invention of claims 9 and 33. The Examiner again makes the error or equating the air

supply with the check valve. Claim 9 recites intermittently supplying air to and through the check valve. It does not recite a check valve supplying air. Check valves are passive not active devices.

Reconsideration of claims 9 and 33-36 is requested in view of the paragraph 16
5 rejection.

In regard to the paragraph 20 rejection, the Examiner states that the microwave of Galloway may be used on the metal braided hose of Satzler '039. This is believed to be technically incorrect. Again, check valves do not supply or regulate air pressure, they are passive devices. It is believed that the combination and modification of the references as 10 suggested herein is without implicit or explicit bases and, as such is improper.

Reconsideration of claims 9 and 33-36 is requested in view of the paragraph 16
rejection.

Claim 36 was rejected under 35 U.S.C. 103(a) as being unpatentable over:
Paragraph 11: Enomoto, the collective teachings of Kolnishe and Merck, Dougherty, Hopkins, and the collective teachings of Gattrugeri, Kunz as applied to claim 33 and further Satzler '316; Paragraph 13: Merck et al. in view of Dougherty, Hopkins and the collective teachings of Gattrugeri and Kunz et al. as applied to claim 33 above and further in view of Satzler; Paragraph 17: Arterburn, the collective teachings of Kolnishe and Enomoto, Hopkins and the collective teachings of Gattrugeri and Kunz et al. as applied to claim 26 above and further in view of Satzler; Paragraph 20 21: Satzler '039 in view of Galloway, the collective teachings of Kolnishe and

Enomoto, Hopkins and the collective teachings of Gattrugeri and Kunz as applied to claim 33 above and further in view of Satzler '316.

In regard to paragraph 11 of the office action, claim 36 is dependent on allowable claim 33. Satzler '316 does not teach or suggest the supply of gas intermittently through a check valve into a hose which is vulcanized from the outside to the inside alone or in combination with any of the other references. Again, the diameter of the hose is not controlled by a passive device such as a check valve.

Reconsideration of claim 36 is requested in view of paragraph 11.

In regard to paragraph 13 of the office action, claim 36 is dependent on allowable claim 33. Satzler '316 does not teach or suggest the supply of gas intermittently through a check valve into a hose which is vulcanized from the outside to the inside alone or in combination with any of the other references. Again, the diameter of the hose is not controlled by a passive device such as a check valve.

Reconsideration of claim 36 is requested in view of paragraph 13.

In regard to paragraph 17, claim 36 is dependent on allowable claim 33. Satzler '316 does not teach or suggest the supply of gas intermittently through a check valve into a hose which is vulcanized from the outside to the inside alone or in combination with any of the other references. Again, the diameter of the hose is not controlled by a passive device such as a check valve.

Reconsideration of claim 36 is requested in view of paragraph 17.

In regard to paragraph 21, claim 36 is dependent on allowable claim 33. Satzler

'316 does not teach or suggest the supply of gas intermittently through a check valve into a hose which is vulcanized from the outside to the inside alone or in combination with any of the other references. Again, the diameter of the hose is not controlled by a passive device such as a check valve.

5 Reconsideration of claim 36 is requested in view of paragraph 21.

Applicant notes paragraphs 7 and 22 of the office action. Response thereto is not necessary.

All claims in the application are believed to be allowable.

Please contact the undersigned by phone if any matter in this application can be
10 expedited or if there are any questions.

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